

8(6), 14(10)

SOV/112-59-3-4648

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3,
pp 51-52 (USSR)

AUTHOR: Sidorov, A. A.

TITLE: Hydraulic Investigation of a Curved Overflow Dam (Gidravlicheskiye
issledovaniye vodoslivnoy plotiny krivolineynogo ochertaniya v plane)

PERIODICAL: Inform. byul. Gos. proyekt. in-t Spetsstroyproyekt, 1958,
Nr 3, pp 19-22

ABSTRACT: To create a water-supply reservoir on the Tobol River, a hydro-
development is being considered that would consist of a concrete overflow dam
and earth dikes. A 279.8-m long dam consists of 14 bays, 16 m each, with a
flat metal gate in each. Fine-grain sands form the dam base. In designing the
dam, investigations were conducted on 1:150 and 1:60 scale models which
showed that with the curved shape of the dam, spreading the tailwater occurs
in the most uniform manner, without whirlpool; this permits water-energy

Card 1/2

8(6), 14(10)

SOV/112-59-3-4648

Hydraulic Investigation of a Curved Overflow Dam

dissipation within a shorter range from the dam than in the case of a straight-line dam. As a result of investigations, the project of a concrete curved dam has been accepted.

G.N.K.

Card 2/2

SIDOROV, A.A.

128-58-4-13/18

AUTHOR: Sidorov, A.A., Engineer

TITLE: Addition of Used Machine Oil to Core Mixes (Dobavka otrabotannogo mashinogo masla k sterzhnevym smesyam)

PERIODICAL: Liteynoye Proizvodstvo, 1958, No. 4, p 26 (USSR)

ABSTRACT:

The short note contains information on the utilization of used machine oil for core mix at the Slobodnenskiy zavod avtodvigately (Slobodnenskiy Automobile Engine Plant). Mineral oil is non-drying and cannot be used as a binder in core mix, however an addition of 0.75% used machine oil to a core mix consisting of 98% earth "K 70/140" and 2% sulphite lye gives good results. It seems that the binding properties of used oil may be explained by oxidation - caused chemical changes in its texture. The information is published for discussion.

AVAILABLE: Library of Congress

Card 1/1

1. Cores-Test methods 2. Cores-Test results

BUZANOV, I.F., red.; VARSHAVSKIY, B.Ya., red.; ORLOVSKIY, N.I., red.;
PODTYKAN, Ya.P., red.; SHEVCHENKO, V.N., red.; POZHAR, Z.A.,
red.; AREF'YEV, T.I., red.; USHAKOV, A.F., red.; MAKSIMOVICH,
A.Ye., red.; SIDOROV, A.A., red.; DANIKOVA, M.G., red.;
SERDYUK, B.M., red.; LAPCHENKO, K.P., *takhn.* red.

[Basic conclusions of research work in 1959-1960] Osnovnye vy-
vody nauchno-issledovatel'skikh rabot za 1959-1960 gg. Kiev,
Izd-vo UASKhN, 1962. 308 p. (MIRA 16:4)

1. Kiev. Vsesoyuznyy nauchno-issledovatel'skiy institut sa-
kharnoy promyshlennosti. 2. Deystvitel'nyy chlen Vsesoyuznoy
akademii sel'skokhozyaystvennykh nauk im.V.I.Lenina (for
Buzanova).

(Sugar beets--Research)

BUZANCV, I.F.; SAMBUROV, V.I.; YEMETS, G.M.; ORLOVSKIY, N.I.;
NEGOVSKIY, N.A.; FEDOROV, A.I.; GREKOV, M.A.; KURBATOV,
S.T.; MEL'NICHUK, A.N.; TONKAL', Ye.A.; GORNAYA, V.Ya.;
ROZHDESTVENSKIY, I.G.; ~~SIIMOROV, A.A.~~; KUDARENKO, F.F.;
BROVKINA, Ye.A.; GELLER, I.A.; DOBROTIVORTSEVA, A.V.;
VARSHAVSKIY, B.Ya.; KUTSURUBA, N.V.; KUZ'MICH, S.I.;
PRESNYAKOV, P.V.; USHAKOV, A.F.; SHEVCHENKO, V.N.;
KHUCHUA, K.N.; PETRUKHA, Ye.I.; POZHAR, Z.A.; SHAPOVALOV,
P.T.; AREF'YEV, T.I.; GRIGOR'YEVA, A.I., red.; BALLOD,
A.I., tekhn. red.

[Sugar beets] Sakharnaia svekla. Moskva, Sel'khozizdat,
1963. 487 p. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sa-
kharnoy svekly. 2. Nauchnyye sotrudniki Vsesoyuznogo
nauchno-issledovatel'skogo instituta sakharney svekly
(for all except Grigor'yeva, Ballod).
(Sugar beets)

SILOROV, A.A.

Small gold placers in the regions of the development of Mesozoic
and Cenozoic volcanic formations. Trudy SVKNII no.3:83-86 '63.
(MIRA 17:11)

YELCHINA, V. I.; SIDOROV, A. A.

Laboratory vibratory feeder for fine powders. Zav. lab. 28
no.12:1527-1528 '62. (MIRA 16:1)

1. Transportno-energeticheskiy institut Sibirskogo otdeleniya
AN SSSR.

(Testing Laboratories—Equipment and supplies)

SIDOROV, Andrey Aleksandrovich; BORSHCHEVSKAYA, S.I., red.; RODCHENKO, N.I.,
techn. red.

[Study electric welding] Skorostnaia elektrosvarka. [Leningrad]
Lenizdat, 1956. 46 p. (NIRA 1187)
(Electric welding)

SIDOROV, A. A.

Cand Agr Sci - (diss) "Utilization of phosphorous acid by sugar beet under various fertilizer conditions." Kiev, 1961. 21 pp; (Ministry of Agriculture USSR, Ukrainian Agricultural Academy); 200 copies; price not given; (KL, 6-61 sup, 233)

PAUTIN, N.V., inzh.; SIDOROV, A.A., inzh.

Investigation of the characteristics of electric power systems.
Elek.sta. 32 no.4:50-58 Ap '61. (MIRA 14:7)
(Interconnected electric utility systems)

L 5228-66 EWP(a)/EPA(a)-2/EWT(m)/JPF(c)/EWP(i)/EWP(j)/T/EWP(b) WW/EM/WH
ACC NR: AP5026039 SOURCE CODE: UR/0072/65/000/009/0017/0019

AUTHOR: Bartenev, G. M.⁴⁴ (Doctor of chemical sciences); Sidorov, A. B.⁴⁴ 31
B

ORG: Department of Solid State Physics MGPI im. V. I. Lenina (Kafedra fiziki tverdogo tela MGPI) 44

TITLE: Effect of the length of glass fibers on their strength 15.44

SOURCE: Steklo i keramika, no. 9, 1965, 17-19

TOPIC TAGS: glass property, glass fiber

ABSTRACT: In order to determine the character of the curves representing the distribution of the strength of glass fibers and their change with the length of the fiber, a rupture micro-tester was developed at the polymer physics laboratory of MGPI (laboratoriya fiziki polimerov MGPI) for testing fibers 1 to 400 mm long. Industrial glass fibers of alkali-free composition obtained from a primary thread were studied. Curves of the strength distribution of glass fibers measuring 6, 8, and 10 μ in diameter and having various lengths showed that the strength of a glass fiber does not obey a random law but is grouped around three definite values. This confirms an earlier hypothesis of the existence of three strength levels σ_A , σ_B .

Card 1/2

UDC: 666.11.01:620.172

L 5230-66

ACCESSION NR: AP5025978

tissue of palatine tonsils and adenoids for 6-12 hr after administration. The use of lysozyme combined with ecmoline causes a more lasting content of lysozyme and an increase in its concentration in the lymphoid tissue. After a simultaneous inhalation of ecmonovocillin, penicillin is found in high concentrations (15.2 — 0.96 u/ml) for 2 hr in palatine tonsils. A sufficient therapeutic concentration is also observed in the blood serum (0.03 — 0.06 u/ml). The results indicate that the use of ecmonovocillin aerosols is beneficial in the treatment and prophylaxis of various diseases of the upper respiratory tract. Orig. art. has: 3 tables.

SUB CODE: LS, CB / SUBM DATE: 24Aug64 / ORIG REF: 006 / OTH REF: 002

Card 2/2 *hd*

L 20407-66 EWP(a)/EWT(m) WW/WH

ACC NR: AP6008403

(A)

SOURCE CODE: UR/0374/66/000/001/0074/0081

AUTHOR: Bartenev, G. M.; Sidorov, A. B.

ORG: Moscow State Pedagogical Institute im. V. I. Lenin (Moskovskiy godudarstvennyy pedagogicheskiy institut)

TITLE: Statistical theory of the strength of glass fibers

SOURCE: Mekhanika polimerov, no. 1, 1966, 74-81

TOPIC TAGS: glass fiber, surface property, stress distribution,
statistic physics

ABSTRACT: A statistical theory of the strength of glass fibers is suggested. It takes into account various types of surface defects and the nature of their distribution along the glass fibers. Comparison with experimental data shows that the statistical theory describes the strength distribution curves in a satisfactory way. The distribution of defects along the glass fibers produced by the continuous drawing-plate method is not a purely random one, as it is probably connected with applied production technology. Orig. art. has: 4 figures and 7 formulas. [Based on authors' abstract.] [NT]

SUB CODE: 11,20/ SUBM DATE: 07Jun65/ ORIG REF: 006/ OTH REF: 004/

Cord 1/1 BK

UDC: 678:666.11.01.620.172

L 34145-66 ENP(er) 7/1/66

ACC NR: AP6026026

SOURCE CODE: GE/0005/66/000/001/0002/0005

AUTHOR: Barteney, G. M.--Bartenew, Georgi Michailowitsch; Sidorov, A. B.--
Sidorow, Askold Borissowitch

12
E

ORG: Lenin State Institute for Pedagogy, Laboratory for Solids Physics, Moscow

TITLE: Statistical theory for the strength¹⁵ of glass fibers¹⁵

SOURCE: Silikattechnik, no. 1, 1966, 2-5

TOPIC TAGS: glass fiber, glass property

ABSTRACT: [German translation (by FRAHM, H., in Berlin) of a Russian-language article] The following subjects were discussed: statistical theory for the strength of glass fibers exhibiting only one kind of surface defect, statistical theory for the strength of glass fibers exhibiting two or more types of surface defect, effect of fiber length on the strength distribution curves, and relation between fiber length and strength. The relationships were expressed in equations and illustrated by diagrams. Orig. art. has: 4 figures and 7 formulas. [JPRS: 35,328]

SUB CODE: 11, 20 / SUBM DATE: none / ORIG REF: 008 / OTH REF: 002

Card 1/1 1052

UDC: 677.521.539.4

0916

1052

SIDOROV, A.D.

A new lower Cambrian stromatolite from Eastern Siberia. Paleont.
zhur. no.4:104-107 '60. (MIRA 14:1)

1. Institut geologii i razrabotki goryuchikh iskopayemykh AN SSSR.
(Baikal region--Algae, Fossil)

38295
S/125/62/000/007/002/012
D040/D113

2302 (2402)
AUTHORS: Bel'chuk, G.A., Petrushin, I.V., Korobov, P.D., and Sidorov, A.D.

TITLE: Corrosion resistance of welded joints between aluminum alloys and steel

PERIODICAL: Avtomaticheskaya svarka, no. 7, 1962, 8-11

TEXT: Results are given of corrosion tests conducted with argon arc welded joints of aluminum alloys and steel, which were produced in experiments by the Leningradskiy korablestroitel'nyy institut (Leningrad Shipbuilding Institute) -IKI, jointly with the Leningradskiy zavod im. A.A. Zhdanova (Leningrad Plant im. A.A. Zhdanov). The welding techniques were previously described by Bel'chuk ("Svaroch-noye proizvodstvo", no. 5, 1961). The strength of welds obtained using these techniques equalled the strength of pure aluminum. The test specimens were prepared by butt-and T-welding AMr6 (AMg6) alloy to zinc-coated low-carbon steel. The corrosion tests, lasting 4,300 hours, were conducted using a Gardner's wheel and a humid-chamber containing a mixture of synthetic sea water and air injected every 30 min. The corrosion resistance was judged according to appearance and mechanical strength tests. No traces of corrosion were revealed in welds; however, the aluminum alloy and steel were affected. The protective effect of ϕ 1-03

Card 1/2

SIDOROV, Aleksandr Filipovich

Role of the Political Division ("M.T.S.") in Organization-Business
Executive Consolidation of Collective Farms (1933-1934)

Defending in Soviet Leningrad Institute of the Perfection of Teaching
Marxism and Leninism, 1953.

SIDOROV, Aleksandr Fedorovich

[The industry of Kirghizistan] Industriia Kirgizstana.
Frunze, Kirgizskoe gos.izd-vo, 1961. 77 p.

(MIRA 16:3)

(Kirghizistan--Industries)

10(6)

SOV/20-123-5-17/50

AUTHORS: Sidorov, A. F., Yanenko, N. N.

TITLE: On the Problem of Unsteady Plane Flows of a Polytropic Gas of Straight Line Characteristics (K voprosu o nestatsionarnykh ploskikh techeniyakh politrofnogo gaza s pryamolineynymi kharakteristikami)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 5, pp 832-834 (USSR)

ABSTRACT: This paper gives a complete classification of the flows mentioned in the title. The above-mentioned straight-line characteristics are lines of equal level of the quantities u_i and c in the phase space x_1, x_2, t . In this case, the hydrodynamical equations have the following form: Euler (Eyler) equation:

$$\frac{\partial u_i}{\partial t} + 2\kappa c \frac{\partial c}{\partial x_i} + \sum_{k=1}^2 u_k \frac{\partial u_i}{\partial x_k} = 0, \quad i = 1, 2$$

Card 1/4

SOV/20-123-5-17/50

On the Problem of Unsteady Plane Flows of a Polytopic Gas of Straight Line Characteristics

Continuity equation:

$$2\kappa \left(\frac{\partial c}{\partial t} + \sum_{k=1}^2 u_k \frac{\partial c}{\partial x_k} \right) + c \sum_{k=1}^2 \frac{\partial u_k}{\partial x_k} = 0$$

It holds that $\kappa = \frac{1}{\gamma-1}$; $\gamma = \frac{c_p}{c_v} > 1$; $c^2 = \left(\frac{dp}{d\rho} \right)_S$; $p = a^2(S) e^\gamma$

γ denotes the coefficient of the adiabatic line and S - the entropy. The equations of the characteristics are given as $dx_1/\Delta_1 = dx_2/\Delta_2 = dt/1$ where Δ_i is assumed to depend on the parameters α_1 and α_2 : $x_i - \Delta_i t = d_i$, $i = 1, 2$. By differentiating these equations with respect to x_k and t , expressions are found for $\partial \alpha_i / \partial x_k$ and $\partial \alpha_i / \partial t$ and the

Card 2/4

variables α_1 and α_2 are then used in the initially mentioned

SOV/20-123-5-17/50

On the Problem of Unsteady Plane Flows of a Polytopic Gas of Straight Line Characteristics

equations which, after this operation, can be written down as $A_i + tB_i = 0$, $i = 1, 2, 3$. The symbols $A_1, A_2, A_3, B_1, B_2, B_3$ are written in full. The conditions $A_i = 0, B_i = 0$, $i = 1, 2, 3$ have to be satisfied. In this way, the authors obtained an overdetermined system of 6 equations for 5 unknown functions. Investigation of the compatibility of this system gives the following results: (r denotes the rank of the system

$$\begin{vmatrix} \frac{\partial u_1}{\partial \alpha_1} & \frac{\partial u_1}{\partial \alpha_2} \\ \frac{\partial u_2}{\partial \alpha_1} & \frac{\partial u_2}{\partial \alpha_2} \end{vmatrix})$$

- 1) The case $r = 1$ is trivial, it gives flows with $c = \text{const}$
 - 2) The case $r = 2$ gives sonic flows, or potential flows, or turbulent flows (only in the case $\gamma = 2$).
- The case $r = 3$ gives only sonic flows. The following conclusion

Card 3/4

SOV/20-123-5-17/50
On the Problem of Unsteady Plane Flows of a Palytropic Gas of Straight
Line Characteristics

may be drawn from the above-discussed considerations: In the
class of the unsteady plane adiabatic motion of a gas ($\gamma \neq 2$)
of straight-line characteristics, there are no turbulent flows
that are different from simple waves and conic flows.

PRESENTED: July 12, 1958, by A. D. Sakharov, Academician

SUBMITTED: March 28, 1958

Card 4/4

16

10(2)
AUTHORS: Sidorov, A.F. and Yanenko, N.N. (Chelyabinsk) SOV/140-59-1-19/25
TITLE: Instationary Plane Flows of a Polytopic Gas With Rectilinear Generators (Neustanovivshiyesya ploskiye techeniya politropnogo gaza s pryamolineynymi obrazuyushchimi)
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 1, pp 187-198 (USSR)
ABSTRACT: The present paper completes a publication of Yu.Ya. Pogodir et al. [Ref 1]. For the investigation of the instationary flow of a polytopic gas the authors use a method different from that of [Ref 1]. It is proved that in the class of instationary plane adiabatic gas motions ($\gamma \neq 2$) with rectilinear characteristics there exist no whirlings beside of simple waves and conic flows. Thus to the considered class there belong 1. simple waves, 2. conic flows, 3. potential flows, 4. for $\gamma = 2$ whirlings depending on two arbitrary functions of a variable.
There is 1 Soviet reference.

SUBMITTED: July 2, 1958

Card 1/1

SIDOROV, A. F. (Chelyabinsk)

"Shock Waves in Flow Fields of Polytropic Gases with Straight Characteristics."

report presented at the First All-Union Congress on Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb 1960.

28508

S/040/61/025/002/020/022
D201/D302

10.1000

AUTHOR: Sidorov, A.F. (Chelyabinsk)

TITLE: On shock-waves in the flow of a polytropic gas having rectilinear characteristics

PERIODICAL: Prikladnaya matematika i mekhanika, v. 25, no. 2, 1961, 377 - 381

TEXT: The 2-dimensional non-stationary motion of a polytropic gas is considered, with equation $p = a^2(S) \rho$, where p is the pressure, ρ is the density, S is the entropy, and γ is the adiabatic constant. The velocity of sound is $c = (dp/d\rho)^{1/2}$ and u_1, u_2 are the components of the velocity vector u . For isotropic flow with rectilinear characteristics in the space $x_1 x_2 t$

$$\frac{dx_1}{\Delta_1} = \frac{dx_2}{\Delta_2} = \frac{dt}{1} \quad (1.1)$$

Card 1/4

28508

S/040/61/025/002/020/022
D201/D302

On shock-waves in the flow of ...

where Δ_1 , Δ_2 ; and also u_1 , u_2 and c are dependent on parameters a_1 , a_2 which determine the position of the characteristics. The basic flow arising from simple waves in a finite flow with $\gamma \neq 2$ is considered ($\gamma = 2$ may give vortex flow). In an adiabatic flow, the normal velocity of the shock-wave front follows from Gyugonio's condition [Abstractor's note: Condition not stated] and similarly for the isothermal case, provided that the shock-wave has rectilinear characteristics. The equations of isothermal flow are given plus the equation of a shock-wave front. Gyugonio's condition gives

$$e^q = D^2, \quad /u/ = D - \frac{1}{D}, \quad u \cdot t = 0 \quad (2.8)$$

where D is the velocity of the front, and t is the tangent vector to the line of the front. Q is found to be

$$q = -u_1^2 - u_2^2 - \frac{1}{2} V(u_1^2 + u_2^2)(u_1^2 + u_2^2 + 4) - Q \quad (Q = \text{const}) \quad (2.15)$$

Card 2/4

28508

S/040/61/025/002/020/022
D201/D302

On shock-waves in the flow of ...

Along the line of the front

$$u_1|_{\alpha_1=f(\alpha_2)} = -f' \sqrt{\frac{F}{1+f'^2}}, \quad u_2|_{\alpha_1=f(\alpha_2)} = \sqrt{\frac{F}{1+f'^2}} \quad (2.16)$$

$$q_1|_{u_1^2+u_2^2=F} = \frac{G}{F} u_1, \quad q_2|_{u_1^2+u_2^2=F} = \frac{G}{F} u_2 \quad (2.17)$$

$$F = \left(D - \frac{1}{D}\right)^2, \quad G = G_1 = -\frac{1}{2} (3F + \sqrt{F(F+4)})$$

where

$$D = \frac{\partial x_2 / \partial t - f' \partial x_1 / \partial t}{\sqrt{(\partial x_2 / \partial x_1 - f' \partial x_1 / \partial x_1)^2 + (\partial x_2 / \partial x_2 - f' \partial x_1 / \partial x_2)^2}} \quad (2.9)$$

$$G = G_2 = \frac{1}{2} (\sqrt{F(F+4)} - F) \quad (2.18)$$

By the Lagrange transformation and introducing polar coordinates $u_1 = r \cos \varphi$, $u_2 = r \sin \varphi$, for Φ^0 , is obtained

$$\frac{\partial^2 \Phi^0}{\partial r^2} + \frac{1}{r^2} \frac{\partial^2 \Phi^0}{\partial \varphi^2} + \frac{1}{r} \frac{\partial \Phi^0}{\partial r} - 4q'^2(r^2) \left(\frac{\partial^2 \Phi^0}{\partial \varphi^2} + r \frac{\partial \Phi^0}{\partial r} \right) = 0 \quad \lambda (2.21)$$

Card 3/4

On shock-waves in the flow of ...

28508
S/040/61/025/002/020/022
D201/D302

where

$$\Phi^0 = \alpha_1 u_1 + \alpha_2 u_2 - \Phi, \quad \frac{\partial \Phi^0}{\partial u_1} = \alpha_1, \quad \frac{\partial \Phi^0}{\partial u_2} = \alpha_2$$

From (2.16) it follows that

$$\begin{aligned} \frac{\partial \Phi^0}{\partial r} \Big|_{r=\sqrt{F}} &= \cos \varphi / f'^{-1} (-\operatorname{ctg} \varphi) + \sin \varphi / (f'^{-1} (-\operatorname{ctg} \varphi)) = l(\varphi) \\ \sqrt{F} \frac{\partial \Phi^0}{\partial r} - \Phi^0 \Big|_{r=\sqrt{F}} &= 0 \end{aligned} \quad (2.22)$$

where f'^{-1} is the reciprocal of f' . Since Φ is not contained explicitly in the coefficient of (2.22) the solution is carried out by Fourier's method. The case of an isothermal gas where the shock-wave has, initially, the form of an ellipse is then considered as an example. This method may be used to find the exact solution of various gaso-dynamic problems with shock-waves in the adiabatic case, and may be extended to the case of curvilinear characteristics. In conclusion, the author thanks N.N. Yanenko for his assistance. There are 2 Soviet-bloc references.

SUBMITTED: April 5, 1960

Card 4/4

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S/040/32/026/002/023/025
D299/D301

AUTHOR: Sidorov, A.F. (Chelyabinsk)
TITLE: Exact solutions in non-stationary two-dimensional gas dynamics
PERIODICAL: Prikladnaya matematika i mekhanika, v. 26, no. 2, 1962, 380 - 386

TEXT: Solutions are obtained to the equations of two-dimensional gas dynamics, by a method set forth by the author (Ref. 3: K voprosu ob udarnykh volnakh v techeniyakh politropnogo gaza, imeyushchikh pryamolineynnye kharakteristiki. PMM, 1961, v. 25, no. 2). In the first part of the present article, the solutions are sought for the region between a curvilinear piston; the pressure along the piston is constant in time. Thereby a generalization is obtained to L.I. Sedov's well-known self-similar solution (Ref. 4: Metody podobiya i razmernosti v mekhanike (Similitude and Dimensional Methods in Mechanics), GITTL, 1957). The shock front is described by the equation

$$\alpha_2 = f(\alpha_1)$$

(0.6) ✓

Card 1/4

Exact solutions in non-stationary ...

S/040/62/026/002/023/025
D299/D301

where α_1 and α_2 are parameters which represent the displacement of the linear characteristics in x_1x_2t -space. The piston line is described by the equation

$$\alpha_2 = o(\alpha_1). \quad (1.1)$$

Solving Hugoniot's conditions at the shock front (0.6), one obtains:

$$a = /u_{1n}/ = \frac{2(D^2 - \gamma)}{(\gamma + 1)D}, \quad p = \frac{2}{\gamma + 1} D^2 - \frac{\gamma - 1}{\gamma + 1}, \quad \rho = \frac{(\gamma + 1)D^2}{(\gamma - 1)D^2 + 2\gamma} \quad (1.2)$$

where D is the normal velocity of the shock front, and γ is the adiabatic index. It is assumed that the shock front is symmetrical. Problems are considered for which the velocity potential in the hodograph plane has the form

$$\Phi^0 = c_1 \phi(r) + c_2 r I_1(\phi) + c_3 \phi_2(r) \cos 2\phi. \quad (1.12)$$

This expression is simplified. The function $\phi_2(r)$ is found by numerical integration (of an earlier equation). Thereupon, one obtains

Card 2/3

Exact solutions in non-stationary ...

S/040/62/026/002/023/025
D299/D301.

$$\begin{aligned} x_1 &= \left(r + \frac{\gamma-1}{2} 00' \right) t \cos \varphi - b \left(\cos \varphi \cos 2\varphi \chi_1'(r) + 2 \sin \varphi \sin 2\varphi \frac{\chi_1(r)}{r} \right) \\ x_2 &= \left(r + \frac{\gamma-1}{2} 00' \right) t \sin \varphi + b \left(\sin \varphi \cos 2\varphi \chi_1'(r) - 2 \cos \varphi \sin 2\varphi \frac{\chi_1(r)}{r} \right) \end{aligned} \quad (1.16)$$

where $r = a$ corresponds to the shock front, and $r = d$ to the piston line. Setting

$$J(r, \varphi, t) = \begin{vmatrix} \partial x_1 / \partial r & \partial x_1 / \partial \varphi \\ \partial x_2 / \partial r & \partial x_2 / \partial \varphi \end{vmatrix} \quad (1.17)$$

one obtains

$$J(r, \varphi, t) = \frac{b^2}{r} \left[t \left(r + \frac{\gamma-1}{2} 00' \right) - b \cos 2\varphi \left(-\chi_1' + 4 \frac{\chi_1}{r} \right) \right]^2 - b^2 \frac{4}{r} \sin^2 2\varphi \left(\chi_1' - \frac{\chi_1}{r} \right)^2 \quad (1.18)$$

Thus the solution has been obtained for the region between the shock front and the piston line, for $t \geq 1$. With $t \rightarrow \infty$, the obtained solution reduces to L.I. Sedov's solution. A numerical example is given. In the second part of the article, the flow behind curvilinear normal detonation-waves is considered; the obtained solutions are valid in a region bounded by the detonation front and by either

Card 3/4

Exact solutions in non-stationary ...

S/040/62/026/002/023/025
D299/D301

a weak-discontinuity line, or by the line of degeneration of the velocity hodograph. The stability and uniqueness of the solutions are not considered. From the conditions of Jouguet and Hugoniot one obtains

$$u_{1n} = \frac{D}{\gamma + 1}, \quad c = \frac{\gamma D}{\gamma + 1} \text{ for } \alpha_2 = f(\alpha_1) \quad (2.2)$$

along the detonation front. After transformations, the following formulas are obtained:

$$\begin{aligned} x_1 &= \left(r + \frac{\gamma-1}{2} 00' \right) \epsilon \cos \varphi + b \left(\cos \varphi \cos \sqrt{\lambda} \varphi \chi'_\lambda(r) + \sqrt{\lambda} \sin \varphi \sin \sqrt{\lambda} \varphi \frac{\chi_\lambda(r)}{r} \right) \\ x_2 &= \left(r + \frac{\gamma-1}{2} 00' \right) \epsilon \sin \varphi + b \left(\sin \varphi \cos \sqrt{\lambda} \varphi \chi'_\lambda(r) - \sqrt{\lambda} \cos \varphi \sin \sqrt{\lambda} \varphi \frac{\chi_\lambda(r)}{r} \right) \end{aligned} \quad (2.19)$$

describing the motion of the detonation front. Further, it is shown (by means of Eq. (1.18)) that J is positive behind the wave front. From Eq. (2.19) it follows that (with $r = 0$), the weak-discontinuity line moves with constant normal velocity, i.e. with the local velocity of sound. Finally, a numerical example is given. There are 2 figures and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc (in translation).

SUBMITTED: October 14, 1961

Card 4/4

CHORONOV, Bakas Sharshembiyevich; SIDOROV, Aleksandr Fedorovich

[Industrial progress in the Kirghiz S.S.R.] Promyshlennyi
progress v Kirgizskoi SSR. Frunze, Kirgizskoe gos. izd-vo
1963. 227 p. (MIRA 17:4)

L 15665-63 EPA(b)/EWT(1)/BDS AFMTC/ASD Pd-4

ACCESSION NR: AP3004119

3/0040/63/027/004/0719/0725

AUTHOR: Sidorov, A. F. (Chelyabinsk)

TITLE: Movement of a compressible fluid in plane channels with moving walls

SOURCE: Prikladnaya matematika i mekhanika, v. 27, no. 4, 1963, 719-725

TOPIC TAGS: compressible fluid, plane channel, moving wall, double wave, polytropic gas, potential flow

ABSTRACT: The flow of double wave type for plane and space motion of polytropic gas has been studied by various other authors. On the basis of using the properties of potential flow they derive equations describing the motion of double waves and investigate a series of applications of the theory of such flow to solving concrete gas dynamic problems. The author considers a new application of the theory of plane double waves under an assumption of potential flow. It turns out that (in the class of double waves) a joining across a fixed characteristic of the established plane of flow of isothermal and polytropic gases with nonstationary plane flow of double wave type is possible. This circumstance permits, under assumptions of hyperbolicity of the studied system of equations (supersonic flow), the substituting of a series of boundary value problems in the hodograph plane for the speed of sound $C(u_1, u_2)$ and

Card 1/32

L 15665-63

ACCESSION NR: AP0004119

the potential $\phi(u_1, u_2)$ where (u_1, u_2) is the velocity vector. If it is possible to find a Bernoulli equation for the speed of sound from the established flow, then in the given case, instead of the Bernoulli equation, it is possible to consider a nonlinear second order equation for $C(u_1, u_2)$ in the hodograph plane which is known from the theory of double waves. For this equation it is necessary to solve boundary value problems of Goursat type or a mixed problem. Basically the author considers the problem in which the distribution of the velocity along the lines of the moving walls and along the lines separating the regions of stationary and nonstationary flow form a curve $K(u_1, u_2) = 0$ fixed in time in the hodograph plane. These boundary value problems permit (in principle) the obtaining of a solution describing the motion of a gas in curvilinear channels whose walls up to a certain place are fixed, then are moved according to a definite law so that the flow in the part of the physical plane bounded by the fixed characteristics going across the final fixed positions of the walls of the channel is stationary and, in the region after the characteristics, is nonstationary. As an illustration for an isothermal gas, Maslov's method is used to solve the problem of joining across a stationary characteristic of a nonstationary double wave with a stationary simple wave. The author thanks N. N. Yanenko. Orig. art. has: 28 formulas and 3 figures.

Card 2/12

SIDOROV, A.F., kand.fiz.-matem.nauk

Seminar on mathematical problems of gas dynamics. Vest. AN SSSR
33 no.8:111 Ag '63. (MIRA 16:8)

(No subject headings)

Михайлов В., Корина; С.В. В., А.В., Отт. ред.

[Origin and development of collective-farm and cooperative property in Kirgizistan, 1917-1932] Возникновение и развитие колхозно-кооперативной собственности в Киргизии (1917-1932 гг.) - Фрунза, Изд-во АН Киргизии, 1964. 161 с. (ИЛ. 17:8)

ACCESSION NR: APL40571

S/0040/64/028/003/0464/0473

AUTHOR: Sidorov, A. P. (Sverdlovsk)

TITLE: Jumps of condensation in three dimensional flows with a degenerate hodograph

SOURCE: Prikladnaya matematika i mekhanika, v. 28, no. 3, 1964, 464-473

TOPIC TAGS: condensation jump, three dimensional flow, degenerate hodograph, steady state flow, double wave, triple wave, shock wave, isentropic flow

ABSTRACT: Under the assumptions that the image of the surface of discontinuity is some curve in the space of the hodograph and that the flow behind the shock wave belongs to the class of double waves, the author studies the flow behind three-dimensional shock waves. Because the flow behind the front of the wave is assumed to be isentropic, he considers only shock waves of constant intensity. He poses the Cauchy problem for a system of equations describing dual waves along certain lines in the plane of independent velocity components. This system of equations is elliptic behind the front of the shock waves and hyperbolic behind normal detonation waves. He obtains certain precise solutions for steady-state, three-

Cord1/2

ACCESSION NR: APl040571

dimensional flow about bodies of a special form in the presence of shock fronts on the basis of the fact that in the stationary case, behind the surface of strong discontinuity, the velocity of sound as a function of the velocity components is the same as in the case of a conic self-simulating flow. Orig. art. has: 71 formulas.

ASSOCIATION: none

SUBMITTED: 25Dec63

DATE ACQ: 19Jun64

ENCL: 00

SUB CODE: ME

NO REF SOV: 006

OTHER: 000

Card 2/2

L 14986-65 EWT(./)/EWP(m)/EPF(n)-2/EWA(d) Ed-4/Pu-4 AEDG(a)/AS(mp)-2 WW

S/0040/64/028/006/1139/1142

ACCESSION NR: AP5000281

AUTHOR: Sidorov, A. F. (Sverdlovsk)

TITLE: Two triple-wave type exact solutions of hydrodynamic equations

SOURCE: Prikladnaya matematika i mekhanika, v. 28, no. 6, 1964, 1139-1142

TOPIC TAGS: isothermal flow, hodograph plane, hydrodynamic theory, equation of state, self similar flow

ABSTRACT: The exact solution was obtained for an isothermal gas flow bounded by three moving, mutually orthogonal planes, and another solution for the discharge of a polytropic gas in vacuum along some dihedral angle for $1 < \gamma < 2$. The triple-wave system of equations is written in the hodograph plane, u_1, u_2, u_3 and then specialized to the case $p = \rho$ with a general solution of the type

$$\Pi = f_1(u_1) + f_2(u_2) + f_3(u_3).$$

The solution is then applied to the flow between three orthogonal planes, moving according to the law $x_i = F_i(t)$. For $0 < t < T$, in the x_1, x_2, x_3 -space, the flow pattern takes the form given in Fig. 1 on the Enclosure, where P_1 corresponds to

Card 1/4

L 14986-65

ACCESSION NR: AP0000281

planes of weak discontinuities. Region A is at rest, region A_{jk} ($j \neq k$) describes a one-dimensional motion of Reimann running waves, in region A_i ($i = 1, 2, 3$) the motion is two-dimensional, corresponding to double-waves, and in region B the wave motion is of third rank. The function $u_i(x_i, t)$ is obtained from

$$x_i = f_i(u_i) + u_i + t(1 + u_i)$$

and f_i is determined from

$$F_i'(t) + F_i'(t) + f_i'(F_i'(t)) = F_i'(t) - t.$$

Next, a gas is considered with equation of state $p = a^2 \rho$ ($a^2 = \text{const}$). The solution is given in three-dimensional self-similar form with the independent similarity variables $\xi_i = (1 + t)^{-1} x_i$ ($i = 1, 2, 3$). The corresponding system of linear equations gives

$$\begin{aligned} 1 + hu_1 + h \operatorname{ctg} \alpha u_2 + h \operatorname{ctg} \beta u_3 + u_1 &= \xi_1 \\ \operatorname{ctg} \alpha (1 + hu_1 + h \operatorname{ctg} \alpha u_2 + h \operatorname{ctg} \beta u_3) + u_2 &= \xi_2 \quad (2.7) \\ \operatorname{ctg} \beta (1 + hu_1 + h \operatorname{ctg} \alpha u_2 + h \operatorname{ctg} \beta u_3) + u_3 &= \xi_3 \end{aligned}$$

where $h = (\gamma - 1)/2$ and

Card 2/4

L 14986-65

ACCESSION NR: AP5000281

$$\operatorname{ctg} \alpha = \left(\frac{1+\gamma}{3-\gamma} \right)^{1/2}, \quad \operatorname{ctg} \beta = \left(\frac{1+\gamma}{(3-\gamma)(2-\gamma)} \right)^{1/2}.$$

The flow regions are depicted graphically on the hodograph as well as \sum_1 planes in the form of tetrahedrons bounded by four planes. Orig. art. has: 28 equations and 3 figures.

ASSOCIATION: none

SUBMITTED: 11Mar64

ENCL: 01

SUB CODE: ME, GP

NO REF SOV: 003

OTHER: 000

Card 3/4

L 14986-65
ACCESSION NR: AP5000281

ENCLOSURE: 01

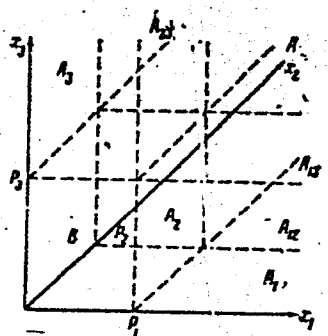


Fig. 1.

Card 4/4

SECRET (S) (C) (U) (X)

1. The purpose of this report is to provide information on the activities of the [redacted] in the [redacted] area. The information is based on [redacted] and [redacted] sources. (U) (C) (U) (X)

L 23441-66 ENT(d)/ENT(1)/ENP(m)/EWA(d)/EWA(1) IJP(c)

ACC NR: AP6007585

SOURCE CODE: UR/0040/66/030/001/0164/0176

AUTHOR: Sidorov, A. F. (Sverdlovsk)

ORG: none

64
63
3

TITLE: On unsteady gas flows adjacent to a stationary region

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 1, 1966, 164-176

TOPIC TAGS: wave propagation, gas flow, unsteady flow, discontinuous flow, Cauchy problem, wave equation

ABSTRACT: The behavior of double waves generated near a weak discontinuity is studied analytically. To this end, the two equations describing the double waves are given as

$$\begin{aligned} & \frac{\gamma-1}{2} \theta \left[\theta_{rr} \left(1 - \frac{\theta_r^2}{r^2} \right) + \frac{1-\theta_r^2}{r^2} \theta_{\phi\phi} + 2 \frac{\theta_r \theta_\phi}{r^2} \theta_{r\phi} + \right. \\ & \left. + \frac{\theta_r}{r} (1 - \theta_r^2) - 2 \frac{\theta_r \theta_\phi^2}{r^2} \right] + \frac{\gamma-3}{2} \left(\theta_r^2 + \frac{\theta_\phi^2}{r^2} \right) + 2 = 0 \\ & \Phi_{rr} \left(1 - \frac{\theta_r^2}{r^2} \right) + \frac{1-\theta_r^2}{r^2} \Phi_{\phi\phi} + 2 \frac{\theta_r \theta_\phi}{r^2} \Phi_{r\phi} + \frac{\Phi_r}{r} (1 - \theta_r^2) - 2 \frac{\theta_r \theta_\phi}{r^2} \Phi_\phi = 0 \end{aligned}$$

with the following Cauchy initial conditions on the line $r = 0$

$$\theta = \frac{2}{\gamma-1}, \quad \theta_\phi = 0, \quad |\theta_r| = 1 \quad \text{при } r=0.$$

A class of solutions is considered to be in the vicinity of $r = 0$, continuous up to
Card 1/2

L 23441-66

ACC NR: AP6007585

the fourth derivative in θ , twice differentiable in r , and twice differentiable in φ .
The solution leads to the hyperbolic equation in Φ

$$z\Phi_{,zz} - \Phi_{,\varphi\varphi} - z\Phi_{,z} = 0 \quad (z > 0)$$

and the elliptic equation

$$z\Phi_{,zz} + \Phi_{,\varphi\varphi} + z\Phi_{,z} = 0 \quad (z > 0).$$

These equations are then used to describe a surface of removable discontinuity in the x_1, x_2, t space. For example, the Cauchy problem at $z = 0$ yields the solution

$$\Phi = z \sum_k (a_k \cos k\varphi + b_k \sin k\varphi) \exp\left(-\frac{k^2-1}{2}z\right),$$

$$\sum_k a_k \cos k\varphi + b_k \sin k\varphi = \frac{1}{r+1} \Pi(\varphi).$$

Finally, it is shown that the surface of weak discontinuity propagating in the stationary gas is represented by

$$t = \Psi(x_1, x_2),$$

where Ψ satisfies the equation

$$\Psi_{,1}^2 + \Psi_{,2}^2 = 1, \quad \Psi_{,1} = \partial\Psi/\partial x_1.$$

This, in turn, leads to an approximate map in the vicinity of a weak discontinuity corresponding to different types of problems. Orig. art. has: 65 equations.

SUB CODE: 20/ SUBM DATE: 15May65/ ORIG REF: 013/ OTH REF: 004

Card 2/2

L 23062-66 ENT(1)/ENP(m)/ENA(d)/ENA(1)

ACC NR: AP6009484

SOURCE CODE: UR/0020/66/167/001/0051/0054

AUTHORS: Sidorov, A. F.

ORG: Sverdlov Section of the Mathematical Institute im. V.A. Steklov,
AN SSSR (Sverdlovskoye otdeleniye matematicheskogo instituta AN SSSR)

TITLE: Gas flow in the vicinity of a slight rupture

SOURCE: AN SSSR. Doklady, v. 107, no. 1, 1966, 51-54

TOPIC TAGS: gas flow, gas analysis, transient flow, rupture strength,
gas kinetics, gas mechanics

ABSTRACT: The problem of adjacent isentropic two-dimensional transient flows of polytropic gas to an area of quiescent gas has been analyzed. The adjacent flows of potential two-fold waves to a storage area and the application of these flows for obtaining an approximate picture of movement in the vicinity of certain arbitrary slight ruptures are discussed. Orig. art. has: 2 formulas. [NT]

UDC: 553.601.1

SUB CODE: 13/

SUBM DATE: 10Jan65/

ORIG REF: 009/

Card 1/1 (u)

L 37078-66 EWP(m)/EWT(1)/EWT(m)/T WW/JW/JWD/WE

ACC NR: AP6012550

SOURCE CODE: UR/0040/66/030/002/0338/0346

AUTHORS: Yermolin, Ye. V. (Sverdlovsk); Sidorov, A. F. (Sverdlovsk)

ORG: none

TITLE: Some configurations of isentropic separation of two-dimensional ignitions

SOURCE: Prikladnaya matematika i mekhanika, v. 30, no. 2, 1966, 338-346

TOPIC TAGS: gas dynamics, vacuum technology, gas flow, Cauchy problem, characteristic method

ABSTRACT: A solution is constructed for certain two-dimensional nonstationary problems on the motion of two planar pistons in a polytropic gas. One problem considered is that of a polytropic gas whose equation of state is $p = a^2 \rho^\gamma$, where p is pressure, ρ is density, γ is the adiabatic indicator, and a^2 is a constant. At an initial time $t = 0$ the gas is at rest within a bounded space formed by the angle of intersection of two planes P_1 and P_2 . The angle α between them is $0 < \alpha < \pi/2$.

The problem is one of locating nonstationary planar flows arising in the gas when the planes P_1 and P_2 (the piston faces) at $t = 0$ begin to move at constant velocity away from the gas with speeds V_1 and V_2 respectively. This problem is modeled in two dimensions, and the characteristic method may be applied to studying the problem of vacuum formation with movement of the pistons. Simple and compound wave formulae are

Card 1/2

L 37078-66

ACC NR: AP6012550

given,

$$u_1^2 + u_2^2 = 1, \quad u_1' \xi_1 + u_2' \xi_2 - \left(\frac{\gamma-1}{2} \theta + u_1 u_1' + u_2 u_2' \right) = 0,$$

$$\frac{\gamma-1}{2} \theta \left[(1 - \theta_1^2) \theta_{11} + 2\theta_1 \theta_2 \theta_{12} + (1 - \theta_2^2) \theta_{22} \right] + \frac{\gamma-2}{2} (\theta_1^2 + \theta_2^2) + 2 = 0$$

$$\xi_i = u_i + \frac{\gamma-1}{2} \theta \theta_i \quad (i = 1, 2)$$

where

$$u_i = u_i(\theta), \quad \theta = \frac{2}{\gamma-1} C, \quad \theta_i = \frac{\partial \theta}{\partial u_i}, \quad \theta_{12} = \frac{\partial^2 \theta}{\partial u_1 \partial u_2}.$$

The line dividing the regions of simple and compound waves may be described mathematically. This leads to the nonlinear system

$$\begin{aligned} & 2(\theta_1 - \varphi) \theta_2' + (\theta_2^2 - 1)(\theta_1 - \varphi) \frac{\varphi'}{1 - \varphi^2} + \\ & + \frac{1}{(\gamma-1)\theta} \left[(\gamma-3)(1 + \theta_1^2 - 2\varphi \theta_1) + 4(1 - \varphi^2) \right] = 0. \end{aligned}$$

Several additional system properties are developed, and a parametric set of equations is derived. The characteristic method of solution is used in developing the configurations of the flow regions occurring. Some concrete examples are discussed. The authors thank V. A. Suchkov for his useful comments. Orig. art. has: 9 figures and 28 equations.

SUB CODE: 12, 20/ SUBM DATE: 09Nov65/ ORIG REF: 004

Cord 2/2

ACC NR: AM/004273

SOURCE CODE: UR/2517/66/014/000/0147/0151

AUTHOR: Sidorov, A. F.

ORG: none

TITLE: On one algorithm for the calculation of optimum difference grids

SOURCE: AN SSSR. Matematicheskii institut. Trudy, v. 74, 1966. Raznostnyye metody resheniya zadach matematicheskoy fiziki (Difference methods for solving problems in mathematical physics), pt. 1, 147-151

TOPIC TAGS: algorithm, computer calculation, difference method, approximation calculation

ABSTRACT: One algorithm for calculating optimal (in respect to smoothness) grids for use in computer solution of problems by difference methods has been developed, suitable for problems with a multiple field solution. The intervals in the field must approximate the equation and must also satisfy special conditions on the field boundaries while the grid steps within the field do not differ greatly. If Q_l is the length of the interval Q_l , $l = 1, 2, \dots, N$, and n_l is the required number of intervals in the field Q_l , then a discrete function f_j , $j = 1, 2, \dots, n_l$ might be constructed so that it satisfies

$$f_{p_l} = f_{p_l+1}, \quad l = 1, 2, \dots, N-1, \quad (1)$$

Card 1/3

ACC NR: AT7004273

$$\sum_{j=p_{l-1}+1}^{p_l} f_j = M_l, \quad l = 1, 2, \dots, N, \quad p_0 = 0, \quad (2)$$

$$L(f) = \sum_{j=1}^{p_{N-1}} \left(\frac{f_{j+1}}{f_j} - 1 \right)^2 = \min_l L(f), \quad (3)$$

where

$$p_k = \sum_{i=1}^k n_i, \quad k = 1, 2, \dots, N.$$

Thus, f_j yields a minimum for the functional $L(f)$ in Problem I. For Problem II of piece-wise differentiable functions, a function $y(x)$ is sought to give a minimum for the functional

$$I = \int_0^1 \frac{\sum_{i=1}^N |y'(x)|^2}{y^2(x)} dx \quad (4)$$

equivalent to the third equation above. It satisfies the condition

$$\int_{p_{l-1}}^{p_l} y(x) dx = M_l, \quad l = 1, 2, \dots, N \quad (5)$$

which replaces the second equation. The solution of Problem II approximates the solution of Problem I. It is an isoperimetric problem of the calculus of variations.

Card 2/5

Euler's equation is used for the functional. The conditions for real roots of the solutions (which are either exponential or trigonometric) are investigated. After the first approximation, an iteration using Newton's method is applied. The algorithm consists of two approximations: 1) the boundary lengths of the intervals are determined on the basis of the field classifications; 2) these intervals are transferred from one field to a neighboring field with a subsequent correction. Orig. art. has: 32 formulas.

Card 3/3

AID P - 3392

Subject : USSR/Electricity

Card 1/1 Pub. 29 - 7/30

Author : Sidorov, A. G.

Title : Reconstruction of a water column of a high-pressure boiler.

Periodical : Energetik, 10, 13-14, 0 1955

Abstract : The author describes the reconstruction of a deficient water column of a boiler of the Venyukovskiy Fixture-Plant. The water column was rebuilt according to the designs of Engineer L. I. Trzheskal. Two drawings.

Institution : None

Submitted : No date

SUNDUK'YAN, G.S.; BOYARINOV, A.K., retsenzents; STARIKOV, A.Ya., retsenzents;
SIDOROV, A.G., redaktor; TSEPLYAYEVA, Z.S., redaktor; LABUS, G.A.,
~~tekhnicheskii~~ redaktor

[Warehouse economy and principles of storing crude hides and furs]
Skladskoe khoziaistvo i osnovy khraneniia zhivotnovodcheskogo syr'ia
i pushniny. Moskva, Gos. izd-vo tekhn. i ekon. lit-ry po voprosam
zagotovok, 1953. 275 p. (MLRA 10:1)
(Hides and skins--Storage)

BLYUMENTAL', Samuil Yefimovich; SUNDUK'YAN, Grigoriy Stepanovich;
SIDOROV, A.G., redaktor; KRIVYANIN, B.I., redaktor;
GOLUBKOVA, L.A., tekhredaktor

[Manual for officials in charge of purchases of unprocessed
livestock products and furs] Spravochnik zagotovitelia
zhivotnovodcheskogo syr'ia i pushminy. Izd. 2-oe, perer. Pod
red. A.G. Sidorova. Moskva, Izd-vo tekhn. i ekon. lit-ry po
voprosam zagotovok, 1956. 367 p. (MIRA 10:4)
(Fur) (Hides and skins)

S/120/61/000/006/001/041
E032/E114

AUTHORS: Golovin, B.M., Osipenko, B.P., and Sidorov, A.I.
TITLE: Homogeneous crystal counters of nuclear radiations
(A review)

PERIODICAL: Priroda i tekhnika eksperimenta, no.6, 1961, 5-13

TEXT: The authors give an account of the history, the principal characteristics and some of the applications of homogeneous crystal (conduction) counters. The paper begins with a brief qualitative account of the physical principles of crystal counters. This is followed by a section on the formation of pulses in dielectric counters. The paper is concluded with a list of possible materials for conduction counters and gives a brief summary of their properties (halides, diamond, cadmium sulphide, silicon, zinc sulphide, liquid and solid argon). All the information reviewed in this paper is available in published literature.

There are 5 figures and 53 references: 9 Soviet-bloc and 44 non-Soviet-bloc. The four most recent English language references read as follows:
Card 1/2

MITRCFANOV, P.I.; SIDOROV, A.I.

Acaricidal aerosols in citrus growing. Trudy VIZR no.20:
21-24 pt.4 '64. (MIRA 18:12)

TOROCHESHIKOV, N.S.; KEL'TSEV, N.V.; SIDOROV, A.I.

Use of synthetic zeolites in the combined drying of and carbon
dioxide removal from air under high pressure. Trudy VNIIT no.47:
68-74 '64. (MIRA 18:9)

Sidorov, A.I.

✓ Lining of hydrolytic equipment with carbon-graphite tiles.
B. M. Zaitsev, B. A. Adamovich, G. D. Kibul'ev, V. M. Vozolazov, and A. I. Sidorov (Hydrolysis Plant, Leningrad).
Gidroliz. i Letoblieni. Prom. S. No. 2, 17-18 (1955).— Lining tiles (1) for hydrolytic plants were made from a mixt. of coke 33, baked anthracite 33, graphite 16, and tar 8%. The cementing material was prep'd. by grinding Na fluorosilicate with andesite and mixing it with Na silicate. I were found superior in its performance to the customary ceramic tiles.
T. Jurcic

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UR/0120/66/000/002/0000/0063

ACC NR: AP0013494

AUTHOR: Akimov, Yu.K.; Van Tszhen'-va, Sidorov, A.I.; Epshtoy, M.I.

ORG: Joint Institute of Nuclear Studies, Dubna (Ob'yedinennyy institut yadernykh issledovaniy)

TITLE: Optical characteristics of semiconductor detectors of nuclear particles and their relation to surface phenomena

SOURCE: Priroda i tekhnika experimenta, no. 2, 1966, 60-63

TOPIC TAGS: semiconductor device, optical detector, photodiode, alpha particle detector, photodiode quantum output

ABSTRACT: This is a study of spectral characteristics and effective quantum output, η , of thick sensitive layer light detectors, ordinarily used as nuclear particle detectors and made from p-type silicone doped with lithium. The detectors, with sensitive layer thickness between 1 and 6 mm, were irradiated by light at the butt. Relative spectral sensitivities and quantum output η were measured using current Hilger and Zeiss optical instrumentation. The results were presented in graphs. A decrease of η in the short wave region was observed, which is considered related to surface phenomena. This fall of quantum output in the short wave region is strongly influenced by the details of the etching process. Between 800 - 1000 nm (nanometers), η was close to unity. It is concluded that the devices can be used in the spectral region of bet-

UDC: 539.1.074.5

Card 1/2

ACC NR: AP0013494

between $\lambda = 800 - 1100$ nm (and in some cases in the region $\lambda = 400 - 1150$ nm) as efficient low inertia light receivers, detectors and counters of the number of arriving quanta, linear over a wide range of light signal intensities. Authors thank: A.I. Kalinin, L.P. Svyatova and L.P. Sidorova for discussions and aid in measurements. Orig. art. has 3 figures, 4 formulas and 1 table.

SUB CODE: 09, 18, 20 SUBM DATE: 09Nov65

ORIG REF: 006

OTH REF: 004

Card 2/2

ACC NR: AP7002423

SOURCE CODE: UR/0051/66/021/006/0754/0758

AUTHOR: Povrozin, A. I.; Sidorov, A. I.

ORG: none

TITLE: The Zeeman effect in an Ne-He laser

SOURCE: Optika i spektroskopiya, v. 21, no. 6, 1966, 754-758

TOPIC TAGS: laser, gas laser, ~~Ne-He laser, Zeeman effect, laser~~ Zeeman effect

ABSTRACT: The findings of several Western authors (Bell and Bloom, Appl. Opt., 3, 1964, 431; Fork and Patel, Proc. IEEE, 52, no. 2, 1964; Gordon and White, ibid.) concerning the Zeeman effect in gas lasers were experimentally confirmed on an Ne-He laser with inner spherical mirrors (radii of 120 and 129.6 cm and transmission coefficients of 0.4 and 1.2%, respectively). The length of the resonator was 111.8 cm. The corresponding difference between the resonance frequencies working on the $TEM_{0,0,q}$ wave, was 134.4 Mc. The dependence of the frequency difference of the doublet of the emission beam on the intensity of the longitudinal magnetic field was experimentally investigated. The oscillograms showed, as expected, a widening between the beat frequencies (33 kc at 35 oe, 99 kc at 105 oe, 165 kc at 175 oe). Also, amplitude modulation was observed on the multiples of the above differential frequencies. The spectrum in the

Card 1/2

UDC: 539.184.28+621.375.9:535

ACC NR: AP7002423

presence of a magnetic field displays the usual picture of one central and two side peaks, the latter resulting from the superposition of waves with different polarizations. A periodic decrease of the beat amplitudes, observed when magnetic field strength was changed, was explained, in agreement with the theory, by a periodic coincidence of the Zeeman components with the resonant frequencies of the laser.

SUB CODE: 20/ SUBM DATE: 29May65/ OTH REF: 007/ ATD PRESS: 5112

Card 2/2

510005-9

AUTHORS: Iglitsyn, M. I., Kontsevoy, Yu. A., Sidorov, A. I. 57-11-5/33

TITLE: Distribution of Non-equilibrium Current Carriers in the Basic Region of the p-n-Junction with a High Injection Coefficient
(Raspredeleeniye neravnovesnykh nositeley zaryada v bazovoy oblasti p-n-perekhoda s vysokim koeffitsiyentom in'yektsii).

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 11, pp. 2458-2460 (USSR).

ABSTRACT: The fundamental results of the solution of the equilibrium system for stationary conditions of a p-n-transition in semiconductors are given according to W. Shockley, i. e. for the electronic region of the p-n-transition with $\gamma \approx 1$ in the case of an arbitrary injection level, with respect to the field outside the transition and the dependence of the lifetime on the injection level. A concrete case of a germanium with the specific resistance $\rho = 2 - 3$ Ohm. cm is investigated. An equation is derived by means of which the analytic relation between the injection level in the vicinity of the p-n-transition and the density of the current can be determined by the junction in the forward direction (for the transition with $\gamma \approx 1$). It is shown that in the vicinity of the p-n-transition the distribution of the non-equilibrium current carriers approaches an

Card 1/2

AUTHORS: Iglitsyn, M. I., Kontsevoy, Yu. A.,
Sidorov, A. I.

57 - 11-6/33

TITLE: Lifetime of Non-equilibrium Current Carriers at Arbitrary Injection Levels (Vremya zhizni neravnovesnykh nositeley zaryada v germanii pri proizvod'nykh ~~urovnyakh~~ in'yektzii).

PERIODICAL: Zhurnal Tekhn. Fiz., 1957, Vol. 27, Nr 11, pp. 2461-2466 (USSR).

ABSTRACT: The dependence of the lifetime on the concentration of the non-equilibrium current carriers at different temperatures is investigated at germanium types alloyed with antimony. It is shown that the lifetime decreases with the increase of the injection level at room temperature in the case of highly resistive types, whereas it increases in the case of low resistance types. A comparison of the experimental results with the theory of W. Shockley and W. Read admits the determination of the level type (donor- or acceptor type), its position in the forbidden zone and the ionization energy, the ratio for the capture probability for holes and electrons, as well as data concerning the dependence of the capture cross sections on the temperature. It can be affirmed that in the case of all types investigated the recombination of the electrons and the holes takes place in the levels of

Card 1/2

Lifetime of Non-equilibrium Current Carriers at Arbitrary
Injection Levels.

57-11-6/33

the acceptor type which lie in the upper part of the forbidden zone at the distance 0,2 eV from the lower boundary of the conductive zone. A comparison of the results obtained here with reference data (Pearson, Read, Morin, Phys. Rev. 93, 666, 1954 and W. Read, Phil. Mag., 46, 111, 1955) admits the final conclusion that the recombination levels in the here investigated types correspond to the greatest extent according to their structure to the energy levels due to structural defects (dislocations).
There are 7 figures, 1 table, 1 Slavic reference.

SUBMITTED: May 8, 1957.

AVAILABLE: Library of Congress.

Card 2/2

89061

15.9120
15.9300

S/138/60/000/010/003/008
A051/A029

AUTHORS: Glupushkin, P.M., Maslennikova, A.A., Otopkova, M.A., Sidorov, A.I.

TITLE: Composition Development of Heat-Resistant Rubbers for Insulating
Current-Conducting Cores in a Continuous Vulcanization Unit

PERIODICAL: Kauchuk i Rezina, 1960, No. 10, pp. 18-23

TEXT: The authors describe the ~~ANB~~(ANV)-continuous vulcanization unit used in the USSR to vulcanize the insulation of current-conducting cores (Fig.1). The vulcanization is completed in one technological stage by the following principle: from the drum fixed on the energy source (1) the current conductor reaches the head of the worm press (2) where the rubber insulation is applied. The design of the rectangular head of the worm press assures a minimum accumulation of the rubber mixture, in order to avoid its scorching. The concentricity of the rubber casing is accomplished by a hard centering of the mandrel's and matrix's position. The insulated conductor, from the head of the worm press directly reaches the vulcanization chamber (4). The vulcanization chamber is joined to the head of the worm press by means of an input or correcting device (3) made in the form of a telescope tube having a horizontal transmission. In stopping or fixing the unit of continuous vulcanization during its functioning

Card 1/8

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A/051/0029

Composition Development of Heat-Resistant Rubbers for Insulating Current-Conducting Cores in a Continuous Vulcanization Unit

the correcting device opens; during the work the device is fixed to the head of the worm press by means of a bayonet catch. The vulcanization chamber is a sectional pipe 60-75 m long. The vulcanization of the rubber casing takes place with the cable passing in the tube at a rate of 150-200 m/min. The vulcanization medium is saturated vapor with a pressure of 15-18 atm. In order to avoid condensation of the water vapor, the vulcanization chamber has an external heater in the form of a vapor sleeve or an induction heater. In order to prevent the vapor from entering from the vulcanization chamber into the cooling pipe, several rubber linings and a metal diaphragm are placed in the middle lock (5). The vulcanized cable is cooled with water in the pipe (6) under pressure of 6-8 atm to avoid the formation of pores in the insulation. At the end of the cooling pipe an exit lock is included (7). After the reversing wheel the cable passes through an open cooling vat 10-15 m long, a blowing device (9), traction device (11), an apparatus of dry testing (12), a compensator (13) and ends up at the double receiver (14). The units are usually supplied with two sources of energy in order to insulate two current-conductors simultaneously. A special device (10) is added to the unit for checking and regulating the thickness of the rubber casing. The insulating rubbers vulcaniz-

Card 2/8

89061

S/138/60/000/010/003/008
A051/A029

Composition Development of Heat-Resistant Rubbers for Insulating Current-Conducting Cores in a Continuous Vulcanization Unit

ed in the ANV unit must possess in addition to the usual physico-mechanical and electrical properties according to OCT-2068-54 (GOST-2068-54), the following specifications: 1) good spraying properties insuring the required speed for sheathing the cable and forming a smooth surface of the casing, 2) the composition of the insulating rubber must insure the formation of a vulcanizate under conditions of a 12-25 sec duration of vulcanization and 180-200°C, having optimum characteristics without scorching; of the rubber mixture at the temperature of its production and spraying; 3) the insulating casing must be sufficiently stable to deformations due to compression at temperatures of up to 200°C, in order to avoid the formation of dents and compression marks; 4) colored insulating rubber is used to differentiate between the different cores in the cable during repair and thus the colored rubber intended for sheathing the cores in the ANV unit must contain heat-resistant dyes. The composition of the insulating rubber used in the ANV unit must have a vulcanizing group which would insure a high rate of vulcanization of the rubber mixture at a temperature of the saturated vapor of 180-200°C without affecting the dielectric properties of the rubber and without causing corrosion of

Card 3/8

89061

S/138/60/000/010/003/008

A051/A029

X

Composition Development of Heat-Resistant Rubbers for Insulating Current-Conducting Cores in a Continuous Vulcanization Unit

the non-tinplated copper conductor, both in the vulcanization process and during the working of the cables. It is pointed out that sulfur as the vulcanizing agent in the rubber previously used in the USSR even in quantities of 0.2 weight parts to 100 weight parts of rubber causes a noticeable corrosion of the copper conductor and lowers the heat-resistance of the rubber. Rubber with a low sulfur content has a more rapid drop of the relative elongation during heat aging than rubber containing thiuram as the vulcanizing agent (Fig. 2). In developing a composition of the rubber, the main properties taken into account were the technological properties of the mixture, the rate of vulcanization and the quality of the obtained vulcanizate. The TCШ-35 (TSSH-35) rubber grade (35% raw rubber including 50% natural rubber and 50% СКБ-РД (SKB-RD) was used as the base of the non-sulfurous rubber composition containing thiuram as the vulcanizing agent. It was established that with 6.0 weight parts of thiuram to 100 weight parts of the rubber the required rate of vulcanization can be achieved for the insulating of conductors in the ANV unit. However, this rubber had poor thermal aging resistance and did not

Card 4/8

89061

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A051/A029

Composition Development of Heat-Resistant Rubbers for Insulating Current-Conducting Cores in a Continuous Vulcanization Unit

comply with the GOST-2068-54 standard as to its heat resistance. Nitro-compounds diazo-compounds, quinones and their derivatives, dithiomorpholine, triethanolamine, dithiocarbamates were tested as accelerators, whereby the dithiocarbamates proved to be the most suitable for the conditions of the ANV unit, particularly zimate (the zinc salt of dimethyldithiocarbamine acid). This accelerator increases the rate of vulcanization of thiuram rubber at 203°C and is safe in respect to scorching. Rubbers with zimate have good heat resistance and in their dielectric properties do not fall behind insulation rubbers used in the cable-manufacturing industry. The presence of glycerol also increased the rate of vulcanization but affected the dielectric properties of the rubber due to its hydrophilic nature. Various condensation resins were tested in the composition and it was found that the greatest effect was obtained from phenol-formaldehyde resins, which not only accelerate the vulcanization of the rubber but increase its heat resistance. The greater activity of the latter is thus explained by the presence of hydroxyl groups which have an activating effect on thiuram. The combined use of 1% phenol-formaldehyde resin and 8% gliftal' -1350 in the rubber lowers the fatigue of the rubber

Card 5/8

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Composition Development of Heat-Resistant Rubbers for Insulating Current-Conducting Cores in a Continuous Vulcanization Unit

containing thiuram. Resin No. 18 was chosen as the most easily obtainable and odorless resin. In the final composition zimate, phenol-formaldehyde resin No. 18, gliftal' resin No. 1350 and glycerol were used. A number of compositions of heat-resistant rubber were developed on this base not containing sulfur and to be used as insulating material for current-conductors in units of continuous vulcanization. An evaluation method was developed based on the deformation determination for temperatures of 150-200°C. There are 7 graphs, 1 diagram and 6 English references.

ASSOCIATION: Nauchno-issledovatel'skiy institut kabel'noy promyshlennosti (Scientific Research Institute of the Cable Industry).

Card 6/8

VAN "SHEP" 71, SIDOROV, A.I.; SIDOROVA, L.P.; SIMONOVA, L.I.

Design of silicon spectrometric detectors with a wide sensitive
region. Prib. i tekhn. eksp. 9 no.4:24-26 J1-Ag '64. (MIRA 17:12)

1. Ob'yedinennyy institut yadernykh issledovaniy.

OLEYNIKOV, Viktor Alekseyevich, kand. tekhn. nauk; BELYKH, Ivan Kalistratovich, inzh.; BARANOVSKIY, Boris Grigor'yevich, inzh.; SIDOROV, Anatoliy Ivanovich, inzh.; SHIPULIN, P.P., kand. tekhn. nauk, red.; YEGOR'KOV, N.F., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Servo system for electric spark machining] Slediashchaia sistema dlia elektroerozionnogo stanka. Leningrad, 1960. 21 p. (Leningradskii Dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriya: Elektricheskie metody obrabotki materialov, no.4)

(MIRA 14:10)

(Electric metal cutting) (Automatic control)

SIDOROV, A. I., kand. ekon. nauk

Ways to save materials in the repair of equipment. Trudy LIMI
no. 24:199-208 '58. (MIRA 12:12)
(Industrial equipment--Maintenance and repair)

L 19461-65 ENT(m)/ENP(t)/ENP(b) IJP(c) JD

ACCESSION NR: AP4044671

S/0120/64/000/004/0084/0086

AUTHOR: Wang, Ts'ien-wa; Sidorov, A. I.; Sidorova, L. P.; Simonova, L. I.

TITLE: Method of producing silicon spectrometric detectors with a broad region of the sensitive layer 27, 27

SOURCE: Pribery* i tekhnika eksperimenta, no. 4, 1964, 84-86

TOPIC TAGS: spectrometric detector. silicon spectrometric detector

ABSTRACT: The development of detectors from Si compensated with Li and having practically no dead layer is reported. The detectors are based on a "new phenomenon" observed by the authors in the course of their experiments with drifting Li ions in Si. At a temperature of 125C and lower and at a voltage over 200 v, the entire high-resistance region had electron-type conductivity. This fact facilitates bringing the space-charge layer to the surface; after removing a thin p-region, a surface-barrier junction can be created by spraying gold. The

Card 1/2

L 19461-65

ACCESSION NR: AP4044671

5

resulting material has a very high resistivity. A theoretical explanation of the phenomenon is offered. "The authors wish to thank B. M. Golovin, B. P. Osipenko and I. V. Sizov for their interest in the work, and also to thank other workers of the Semiconductor Group of the Nuclear-Reaction Laboratory." Orig. art. has: 4 figures and 7 formulas.

ASSOCIATION: Ob'yedinenny*y institut yaderny*kh issledovaniy (Joint Nuclear Research Institute)

SUBMITTED: 25Jul63

ENCL: 00

SUB CODE: EC, NP

NO REF SOV: 003

OTHER: 006

Cord 2/2

S/118/61/000/008/003/005
D267/D304

AUTHOR: Sidorov, A.I., Economist

TITLE: The economic efficacy of automating existing equipment

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva,
no. 8, 1961, 47 - 50

TEXT: The author objects to Ya.A. Auerkhan's argument, expressed in his book (Ref 1: Avtomatizatsiya i obshchestvo (Automation and Society), Sotsekgiz, 1960, p. 39) that the automation of existing equipment hinders the transition from existing technology to advanced automated technology. Sidorov argues that the use of modernized equipment in mass production is one of the main means of accelerating automation. The argument is illustrated with examples of how automatic production lines have been assembled from existing equipment at the Moskovskiy instrumental'nyy zavod "Frezer" (Moscow "Frezer" Tool Plant), the Gor(kovskiy zavod "Krasnaya Etna" (Gor'kiy "Krasnaya Etna"

Card 1/2

SIDOROV, A.I., aspirant

Aerosol pots on protected plots. Zashch. rast. ot vred. i
bol. 5 no. 8:38-39 Ag '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity
rasteniy. (Agricultural pests) (Aerosols)

GERASIMOV, B. A.; OSNITSKAYA, Ye. A.; SIDOROV, A. I.

Sulfur smoke pots. Zashch. rast. ot vred. i bol. 5 no.10:
34-35 0 '60. (MIRA 16:1)

1. Nauchno-issledovatel'skiy institut ovoshchnogo khozyaystva
RSFSR, st. Perlovskaya, Moskovskoy zheleznoy dorogi.

(Fumigation)

BEREZINA, N.P.; GLUPUSHKIN, P.M.; KASHIN, V.A.; SIDOROV, A.I.

Conductive rubbers in cable goods. Kauch.i rez. 21 no.9:21-26
S '62. (MIRA 15:11)

1. Tomskiy nauchno-issledovatel'skiy institut kabel'noy
promyshlennosti i Moskovskiy nauchno-issledovatel'skiy
institut kabel'noy promyshlennosti.
(Rubber—Electric properties)
(Cables)

DUNSKIY, V.F.; SIDOROV, A.I.

Existence of an aerodynamic crisis when a stream of light
aerosols or gas is allowed to propagate in a closed room.
Inzh.-fiz. zhur. 7 no. 3:42-45 Mr '64. (MIRA 17:5)

SIDOROV, A.I., kandi. tekhn. nauk (Moskovskaya obl.); LAZAKOVA, V.I., inzh.
(Moskovskaya obl.)

Smoke means. Zashch. rast. ot vred. i bol. 8 no.10:34-36
0 '63. (MIRA 17:6)

1. 42998-65 E.T(1)/T T(m)/T/EMA(h) Pt-6/Peb IJP(c) AT
 ACCESSION NR: AP5006536 S/0056/65/048/002/0767/0769
 AUTHOR: Akimov, Yu. K.; Kalinin, A. I.; Nikitin, V. A.; Pantuyev, V. S.;
 Sviridov, V. A.; Sidorov, A. I.; Khachatryan, M. N.
 TITLE: A method for studying elastic pp-scattering in the high energy region
 using semiconductor counters
 SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 2, 1965,
 767-769
 TOPIC TAGS: proton scattering, high energy proton scattering, proton semiconductor
 counter
 ABSTRACT: The possibility of studying high energy proton elastic scattering in the
 region of weak transmitted impulses $1.5 \cdot 10^{-3} \text{ GeV}/c \leq -t \leq 1.5 \cdot 10^{-1} \text{ GeV}/c$ using semi-
 conductor nuclear particle detectors is shown experimentally. The experiments were
 conducted on the synchrophasotron at the Joint Institute of Nuclear Investigations.
 The proposed method is applicable for investigations in the region of weak trans-
 missions for any reaction of the type $a + b \rightarrow c + d$. In fig. 1 of the Enclosure
 (case a), a sharp peak is seen for protons transmitted with an energy of 2.2 Mev.
 Card 1/3

L 42988-65

ACCESSION NR: AP5006536

The peak width at the semi-peak points, covering about 330Kev or 15%, was determined basically by Coulomb scattering of protons transmitted to the target and by test geometry. For comparison (case *b*), the distribution of particles emitted from the same target under identical conditions, along mean free paths in a 25% photographic emulsion, is given. The peak for elastically scattered protons has a halfwidth of $\Delta E/E \approx 18\%$, i.e., somewhat wider scattering than obtained with a semiconductor counter. "In conclusion the authors thank L. I. Lipidus and I. V. Chuvilo for interest in the work, and also V. F. Kushniruk and L. N. Strunov for assistance in the experiment." Orig. art. has: 1 figure, 1 formula.

ASSOCIATION: Ob'yedinenyy institut yadernykh issledovaniy (Joint Institute of Nuclear Investigations)

SUBMITTED: 03Dec64

ENCL: 01

SUB CODE: NP, EC

NO REF SOV: 001

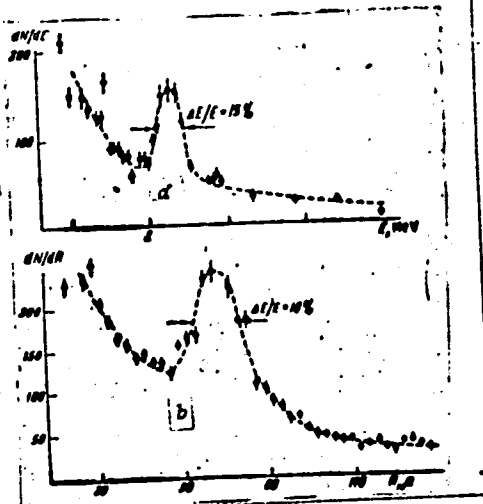
OTHER: 001

Card 2/3

L 42932-65
ACCESSION NR: AP5006536

ENCLOSURE: 01

Fig. 1. Spectra of particles emitted at an angle of 87.7° from a target $(CH_2)_n$ bombarded by a beam of 10Gev protons: a--energy distribution measured with a semiconductor counter; b--distribution by mean free paths in a 25% diluted gelatin photoemulsion



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Card 3/3

L 45279-66 EWT(1)/EEC(k)-2/T/ENP(k), IJP(c) WG

ACC NR: AP6030149 (A) SOURCE CODE: UR/0120/66/000/004/0161/0164

AUTHOR: Povrosin, A. I.; Sidorev, A. I.

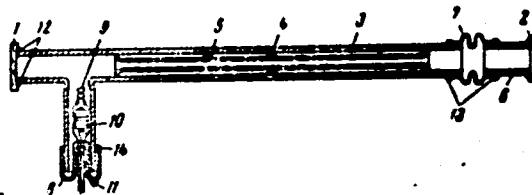
ORG: none

TITLE: Equipment for studying the Zeeman effect in a gas laser *25*

SOURCE: Pribery 1 tekhnika eksperimenta, no. 4, 1966, 161-164

TOPIC TAGS: Zeeman effect, gas laser

ABSTRACT: The design of a special internal-mirror He - Ne laser and its application to studying the Zeeman effect are described. Two spherical mirrors 1 and 2 having radii of curvature of 120 and 129.6 cm, respectively, form the laser resonator (see figure). Mirror 1 consisting of 17 sprayed layers of ZnS alternating with MgF₂ has a transmissivity of 0.4%; mirror 2 has 11 layers and a transmissivity of 1.2%. Quartz tube 3 stabilizes mirror 1 mechanically and prevents its angular displacement upon heating of internal tube 5 by the discharge. Mirror 2 can be adjusted; sylphon 7 serves as an anode. All



Card 1/2

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ACC NR: AP6030149

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dimensions are given in the article. The above laser was placed in a magnetic field (up to 500 oe) produced by a solenoid, and its radiation was observed by a Nicol-prism-photomultiplier-oscilloscope system. With a longitudinal magnetic field and at a wavelength of 6328 \AA , the oscilloscope showed a sine wave whose frequency was equal to the difference of frequencies of the doublet line that represented the laser radiation. Seven oscillograms are shown. Orig. art. has: 4 figures. [03]

SUB CODE: 20 / SUBM DATE: 20Jun65 / ORIG REF: 002 / OTH REF: 006/ ATD PRESS: 5085

PICHUGIN, A.A., dotsent, kand.tekhn.nauk; BOCHAROV, Ye.V., inzh.. Prini-
 mali uchastiye: KUZ'MINSKIY, A.G., inzh.; VORONKINA, M.A., inzh.;
 FEDOROV, A.A., inzh.; BELOUSOV, M.A., inzh.ekonomist; PROSVIRNIN,
 G.V., inzh.; KNIGINA, G.I., dotsent, kand.tekhn.nauk; LESNIKOV,
 V.V., dotsent, kand.tekhn.nauk; SIDOROV, A.K., dotsent, kand.
 arkhitektury; KARTASHOV, A.A., arkhitektor; BARITSKIY, F.F., dotsent,
 kand.tekhn.nauk; KULISHOV, D.A., prof.; ZDESENKO, G.M., kand.tekhn.
 nauk; ALEKSANDRENKO, A.I., dotsent, kand.tekhn.nauk; STREL'NIKOV,
 G.Ye., kand.tekhn.nauk; VANEYEV, V.A., assistant; CHEREPKO, P.A.,
 dotsent. SUSHINSKIKH, A.F., inzh., retsenzent; MEN'SHIKOV, P.N.,
 red.; SUBBOTINA, G.M., tekhn.red.

[Manual for rural builders] Spravochnik proizvoditelia rabot
 sel'skokhoziaistvennogo stroitel'stva. Novosibirsk, Novosibirskoe
 knizhnoe izd-vo. Vol.1. 1959. 673 p. Vol.2. 1959. 677-1191 p.
 (MIRA 13:2)

(Farm buildings)

KHIDZHAN, N.A.; SIDOROV, A.I.

Improvement of assembly line production. leg. prom. 17 no. 5:43-45
(MIRA 10:6)
By '57.

1. Glavnyy inzhener Tbilisskoy obuvnoy fabriki No.1 (for Khidzhan).
2. Nachal'nik tekhnicheskogo otдела Tbilisskoy obuvnoy fabriki No.1
(for Sidorov).

(Assembly line methods)

TARNOVSKIY, Konstantin Nikolayevich; SIDOROV, A.L., prof., red.; SHILOVA, K.A., red.; YERMAKOV, M.S., tekhn. red.

[Formation of state and monopolistic capitalism in Russia during
The First World War; study based on the metallurgical industry]
Formirovanie gosudarstvenno-monopolisticheskogo kapitalizma v
Rossii v gody pervoi mirovoi voyny (na primere metallurgicheskoi
promyshlennosti. [Moskva] Izd-vo Mosk. univ., 1958. 262 p.
(Metal industries) (MIRA 11:9)

SIDOROV, A.L.; BUDOVNITS, I.U., red.isd-va; BRUZGUL'S, V.V., tekhn.red.

[Financial condition of Russia during the years of the First
World War, 1914-1917] Finansovoe polozhenie Rossii v gody
pervoi mirovoi voyny, 1914-1917. Moskva. Izd-vo Akad.nauk SSSR,
1960. 578 p. (MIRA 13:9)
(Finance) (European War, 1914-1918)

DUBROVSKIY, S.M., doktor ist. nauk, prof., otv. red.; SIDOROV, A.L.,
doktor ist. nauk, prof., red.; SHATSILLO, K.F., kand. ist.
nauk, red.; BESTUZHEV, I.V., red. izd-va; GOLUB', S.P., tekhn.
red.

[Characteristics of the agrarian system in Russia in the period
of imperialism; materials] Osobennosti agrarnogo stroia Rossii v
period imperializma; materialy. Moskva, Izd-vo Akad. nauk
SSSE, 1962. 351 p. (MIRA 15:9)

1. Sessiya Nauchnogo soveta po probleme "Istoricheskiye predpo-
sylki Velikoy Oktyabr'skoy sotsialisticheskoy revolyutsii," Mos-
cow, 1960. 2. Institut istorii Akademii nauk SSSR, Moskva (for
Dubrovskiy, Sidorov).

(Land tenure)

VOLOBUYEV, Pavel Vasil'yevich; SIDOROV, A.L., doktor ist. nauk,
prof., otv. red.; AVERKH, A.Ya., red. izd-va; PRUSAKOVA,
T.A., tekhn. red.; GJSEVA, A.P., tekhn. red.

[Economic policy of the Provisional Government] Ekonomiche-
skaya politika Vremennogo pravitel'stva. Moskva, Izd-vo
Akad. nauk SSSR, 196?. 482 p. (MIRA 15:11)
(Russia--February Revolution, 1917)
(Russia--Economic policy)

SIDOROV, A.M.

Safety awnings. Bezop. truda v prom. 2 no. 6:33 Je '58.(MIRA 11:7)
(Coal mines and mining--Safety measures)

SIDORKOV, A.M.

Basic stages in the development of higher pharmaceutical education
in Moscow. Apt.delo 8 no.4:35-39 J1-Ag '59. (MIRA 12:10)

1. Iz kafedry organizatsii farmatsevticheskogo dela farmatsevti-
cheskogo fakul'teta I Moskovskogo ordena Lenina meditsinskogo
instituta imeni I.M.Sechenova.

(MOSCOW--PHARMACY--STUDY AND TEACHING)

SIDOROV, A.N., inzh., ~~TEREKHOV~~HOV, S.M., inzh.

Some problems in building the cold-rolling of the Novolipetsk
Iron and Steel Plant. Prom. stroi. 38 no.8:16-21 '60.
(MIRA 13:8)

(Novolipetsk--Rolling mills)

SIDOROV, A.N.

Machine-shop optical instrument for comparative measurement of
surface smoothness by sampling. Trudy Sem.po kach.poverkh.2:51-57
'53. (MLRA 7:2)

(Surfaces (Technology)) (Measuring instruments)

SIDOROV, Aleksandr Nikolayevich, dotsent; IVANOVSKIY, Mikhail Nikolayevich,
dotsent; ZUYEVA, K.N., red.; KRZHIZHANOVSKAYA, G.V., red.;
GUREVICH, M.M., tekhn.red.

[Hydraulics and hydroelectric power stations] Gidravlika i gidro-
silovye ustanovki. Moskva, Gos.izd-vo sel'-khoz.lit-ry, 1959.
487 p. (MIRA 12:12)

(Hydraulics)

(Hydraulic power stations)